

Environmental Resource Actions

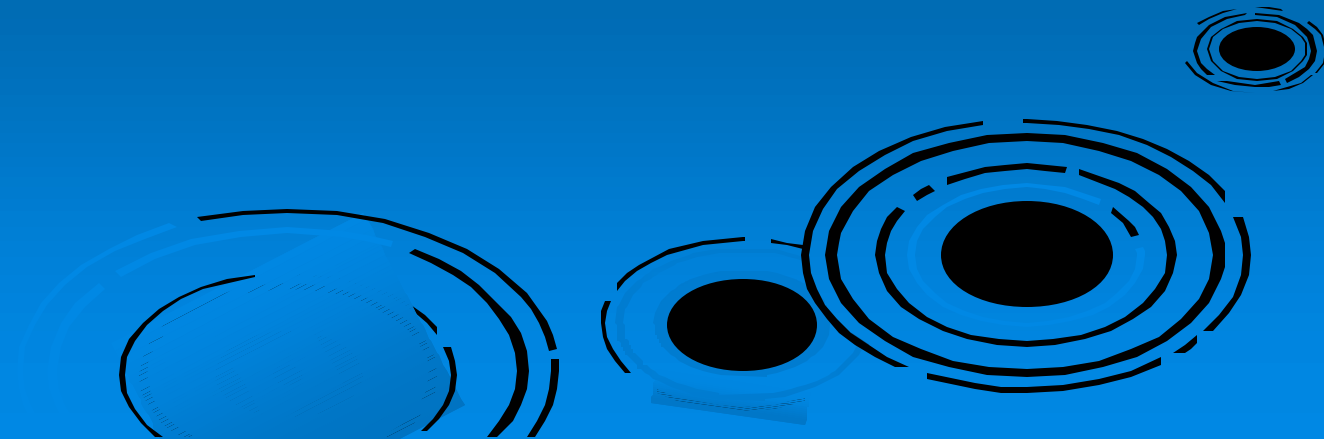
December 16, 2003

Prepared by:
Terry J. Mills
Division of Environmental Services



Purposes

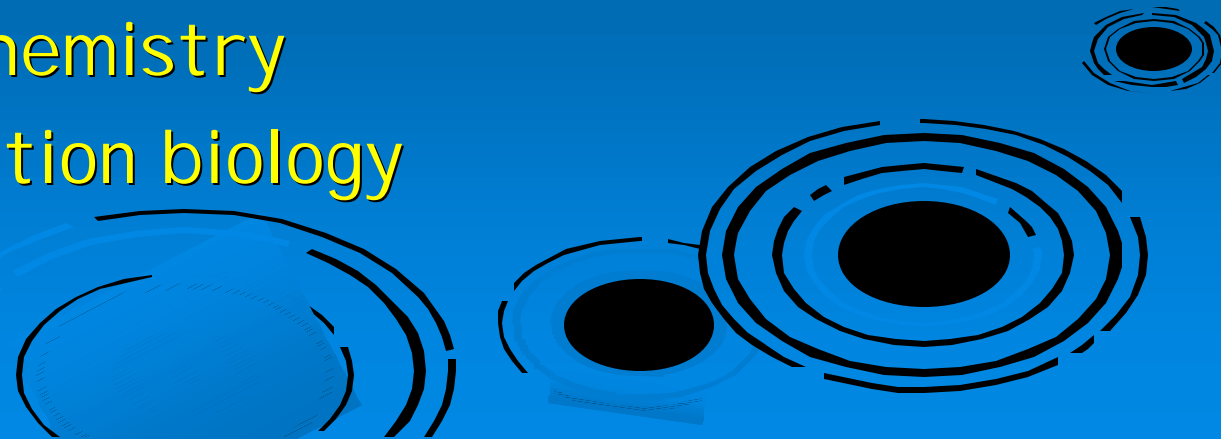
1. Describe EWG Process for Developing Resource Actions
2. Describe Current Status of Resource Action Development



Nature of the EWG

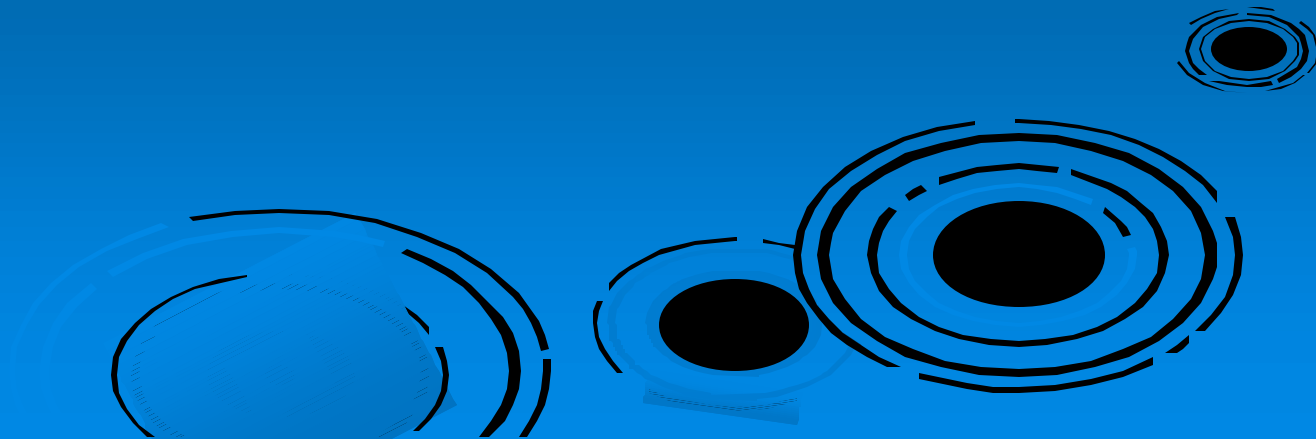
◆ Scientists and Technical Experts

- ◆ Fishery and aquatic biology
- ◆ Terrestrial biology
- ◆ Botany
- ◆ Geology
- ◆ Geomorphology
- ◆ Water chemistry
- ◆ Conservation biology



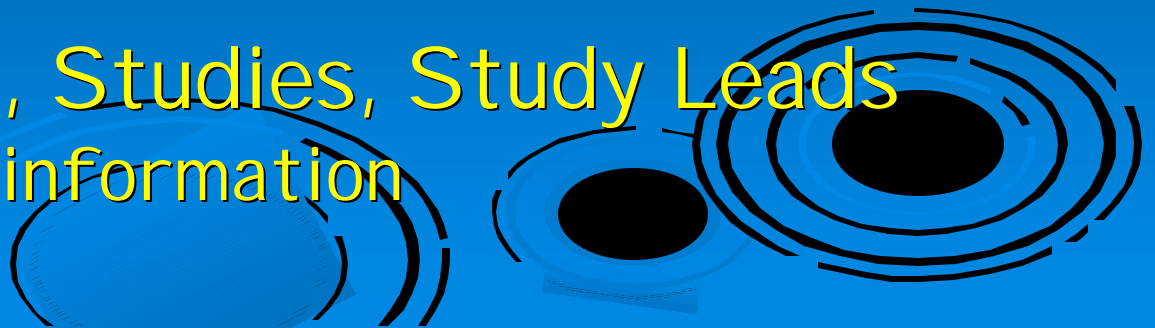
EWG Strategy

- ◆ Build on Existing Efforts
- ◆ Use a Transparent Process
- ◆ Be Open to Suggestions
- ◆ Meet Commitments



Build on Previous and Ongoing Efforts of the Collaborative

- ◆ Inclusive vs. Exclusive
- ◆ Impacts from Issue Tracker
 - ◆ Appendix B of Scoping Document 1
- ◆ Issue Sheets
 - ◆ Issue Statements
 - ◆ Resource Goals
- ◆ Study Plans, Studies, Study Leads
 - ◆ Data and information



For Example: Issue Sheets

Issue Area	Number of Sheets	Number of Resource Goals
Fisheries	16	39
Water Quality	18	36
Terrestrial	11	27
Geology	5	11
Total	50	113

Resource Actions Dimensions

◆ Scope

- ◆ Geographic
 - ◆ Lower River
 - ◆ Thermalito Complex
 - ◆ Lake Oroville
 - ◆ Watershed above Lake

◆ Action Type

- ◆ Operational Changes
- ◆ Flow Related
- ◆ Construction Activities

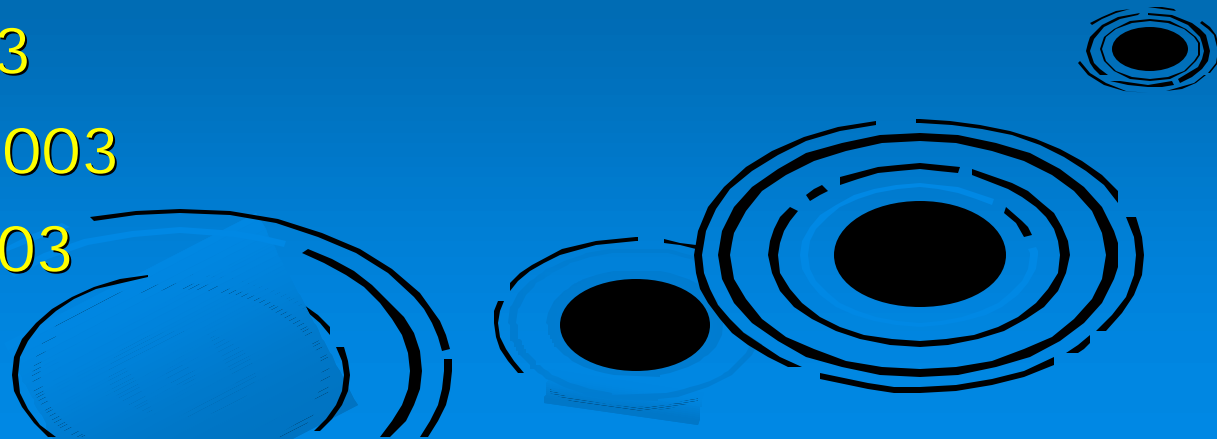
◆ Issue Area

- ◆ Fisheries
- ◆ Terrestrial
- ◆ Water Quality
- ◆ Fluvial Processes
- ◆ (Cultural)
- ◆ (Recreation)
- ◆ (Land Use)
- ◆ (Operations)



Preparing the EWG

- ◆ Nov 20, 2002 – 1st Discussion of Potential PM&E
- ◆ Dec 11, 2002 – More Details, Resource Goals,
- ◆ Jan 29, 2003 – List of Resource Goals
- ◆ Presented Draft Resource Action Development for Geographic Area Discussion
 - ◆ Feb 19, 2003
 - ◆ March 26, 2003
 - ◆ April 23, 2003



EWG Resource Action Discussions

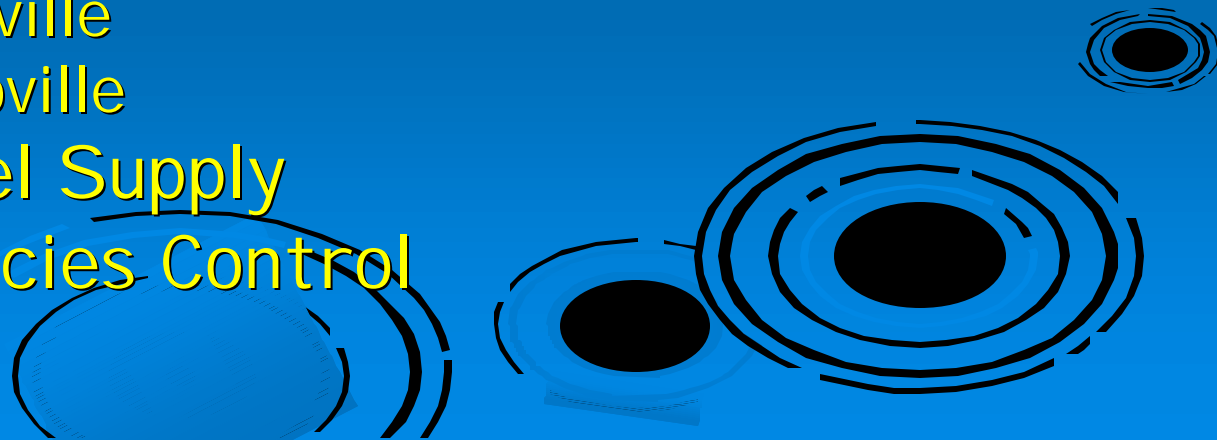
- ◆ Built on Existing Documents/Efforts
- ◆ Geographic Scope for Discussion

Process Credibility

1. Interviewed Study Leads
2. Identified Resource Goals
3. Identified Issues/Project Impacts
4. Identified Available Study Data
5. Identified Forthcoming Study Data
6. Suggested Potential Resource Actions
7. Accepted Suggestions from EWG Members

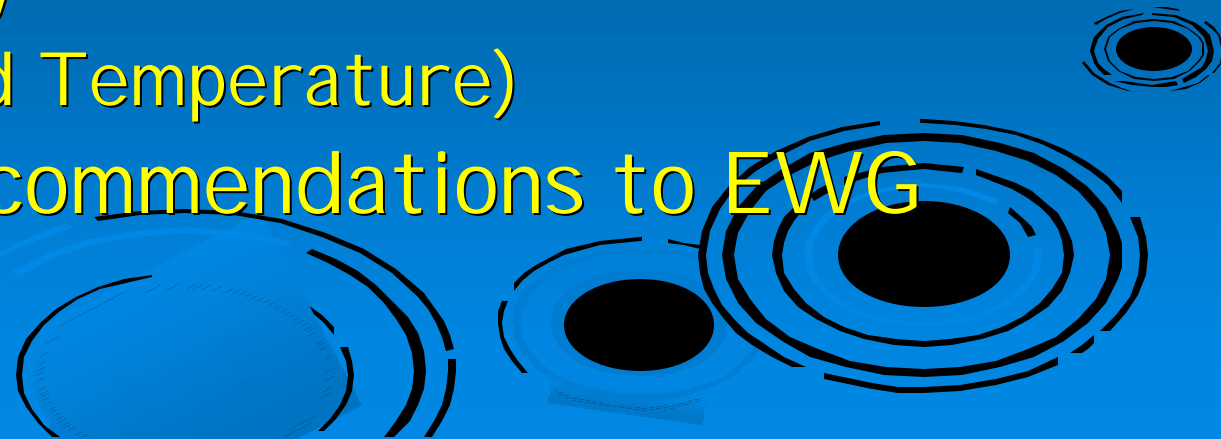
Preliminary Action List

- ◆ Flow
- ◆ Temperature
- ◆ Fish Habitat
 - ◆ Lower Feather River
 - ◆ Lake Oroville
- ◆ Terrestrial/Riparian Habitat
- ◆ Hatchery
- ◆ Fish Passage
 - ◆ Below Oroville
 - ◆ Above Oroville
- ◆ Coarse Gravel Supply
- ◆ Invasive Species Control



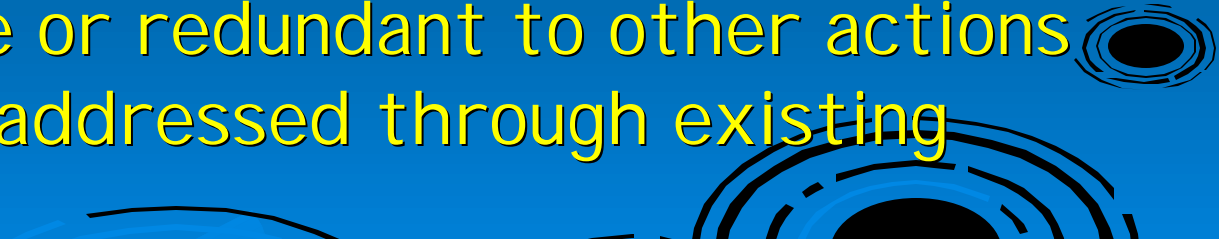
EWG Task Forces

- ◆ Task Forces convened for the following:
 - ◆ Fisheries
 - ◆ Water Quality
 - ◆ Terrestrial
 - ◆ Fluvial
 - ◆ Hatchery
 - ◆ (Flow and Temperature)
- ◆ Provide Recommendations to EWG



Categories for Resource Actions

◆ 5 Categories

1. Ready for further evaluation
 2. Needs additional information and data are being collected
 3. Needs data but no studies are underway
 4. No further action
 5. Duplicate or redundant to other actions or being addressed through existing license
- 

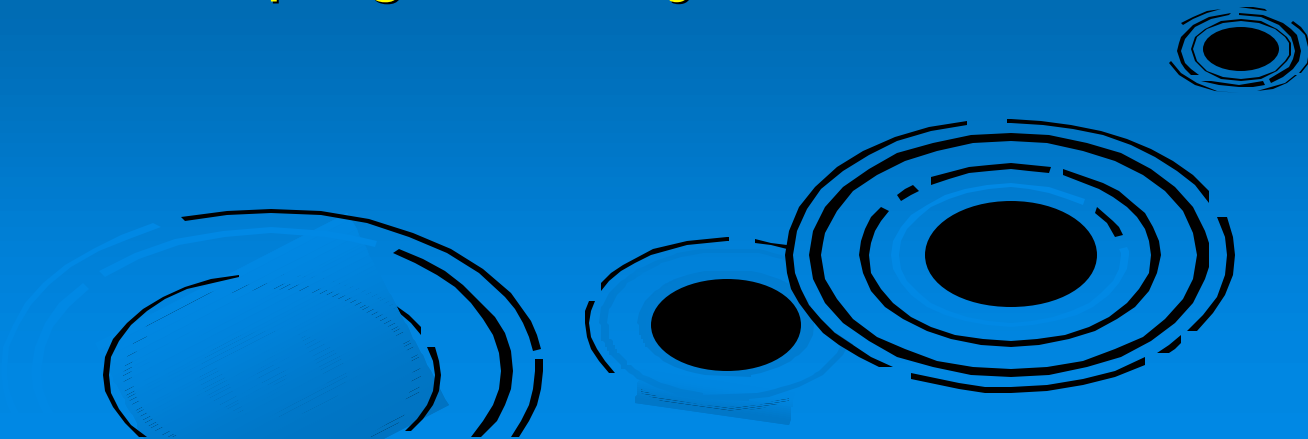
Resource Action Statistics

Category	Number
Ready for evaluation	19
Needs additional information	38
Needs data	9
No further action	24
Duplicate	25
Uncategorized	4
Total	129

EWG Narrative Reports

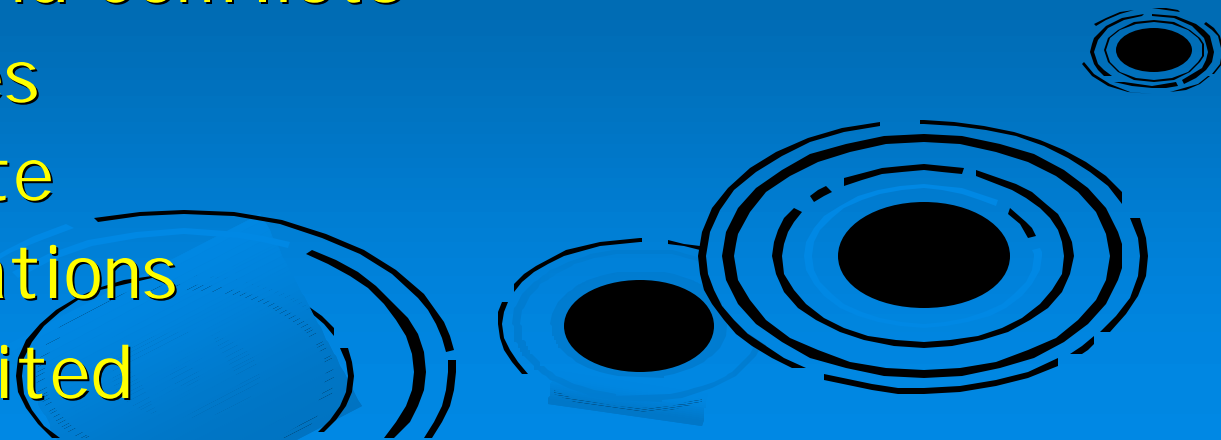
Purpose:

- ◆ Threshold Decision Documents
 - ◆ Evaluate merits and constraints of resource action
 - ◆ Contains technical information
 - ◆ Contributes to Resource Action development
- ◆ Useful for Developing January 2005 PDEA



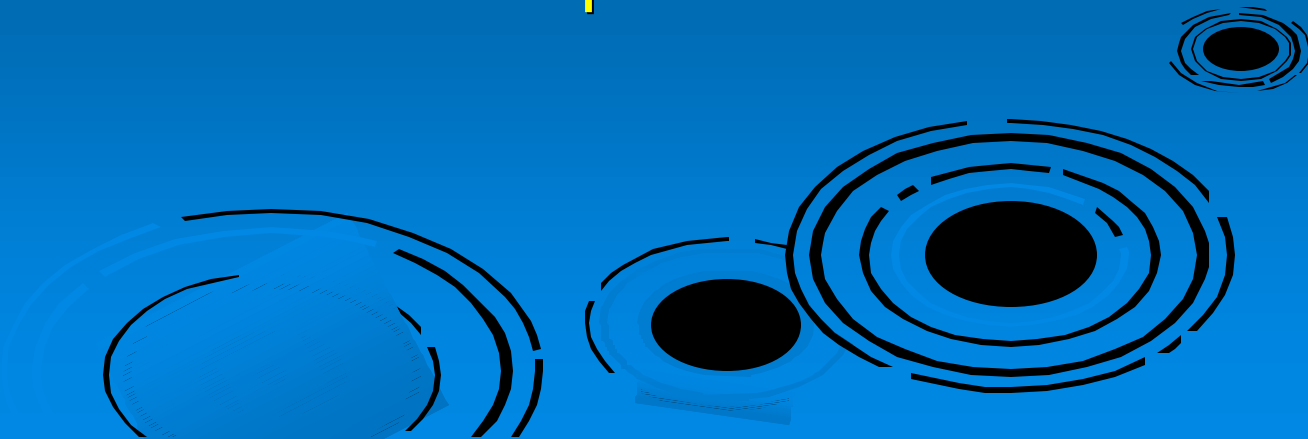
Layout of Narrative Reports

1. Description of Resource Action
2. Nexus to Project
3. Potential Environmental Benefit
4. Potential Constraints
5. Existing Conditions in Proposed Area
6. Design Considerations and Evaluation
7. Synergism and Conflicts
8. Uncertainties
9. Cost Estimate
10. Recommendations
11. Literature Cited



Organizing Resource Actions

- ◆ Aggregate actions where appropriate
 - ◆ How?
 - ◆ E.G. Fisheries habitat actions
 - ◆ Rather than evaluate each individual action can we assess the potential outcome of several related actions?
- ◆ Groups of Actions vs. Specific Actions



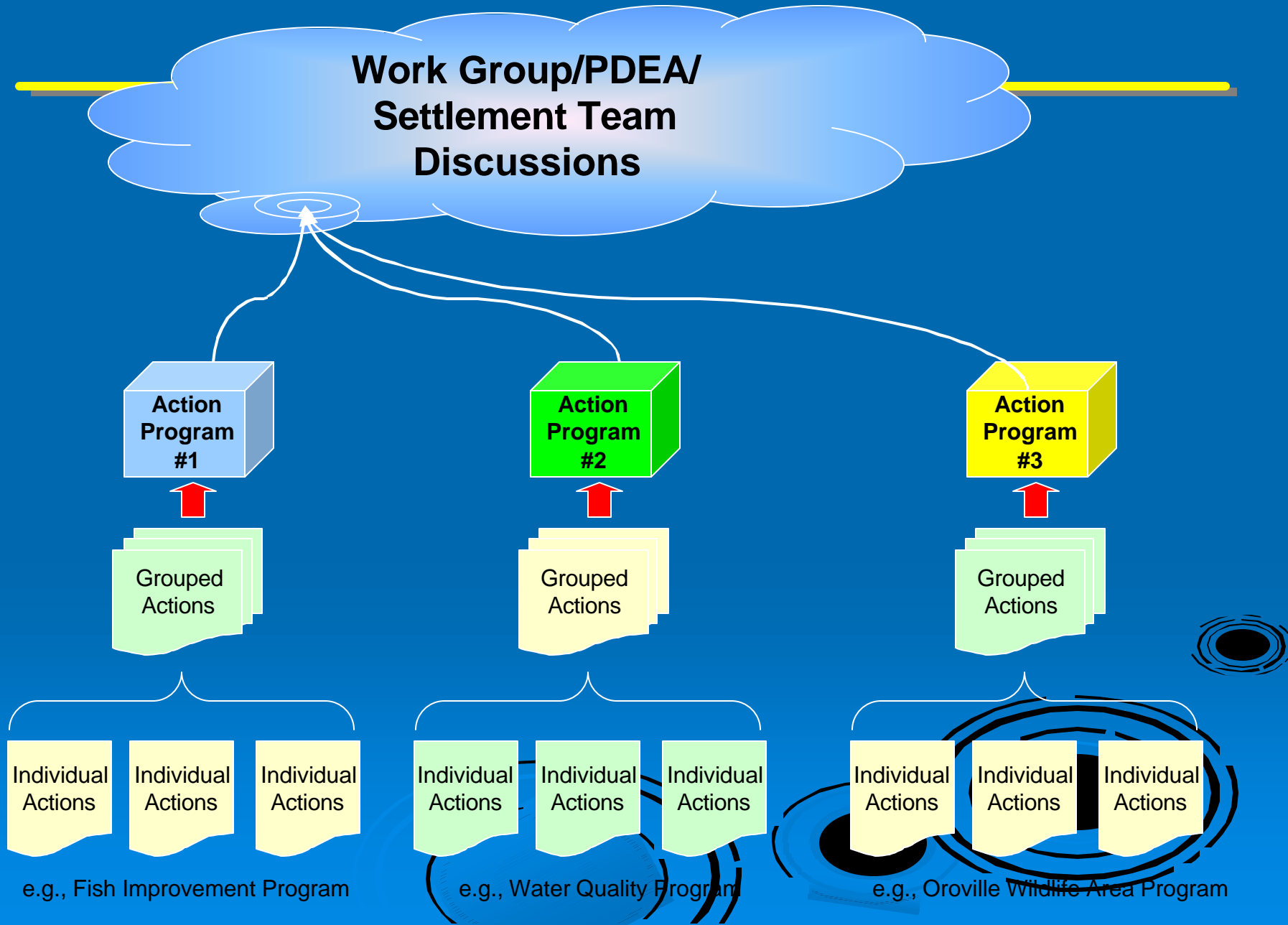
EWG: Use of Term "Program"

◆ Programs are:

- ◆ Logical groupings of Resource Actions
- ◆ Related by
 - ◆ Type
 - ◆ Location
 - ◆ Specific issue
- ◆ Not intended to imply anything else
- ◆ Not linked to settlement



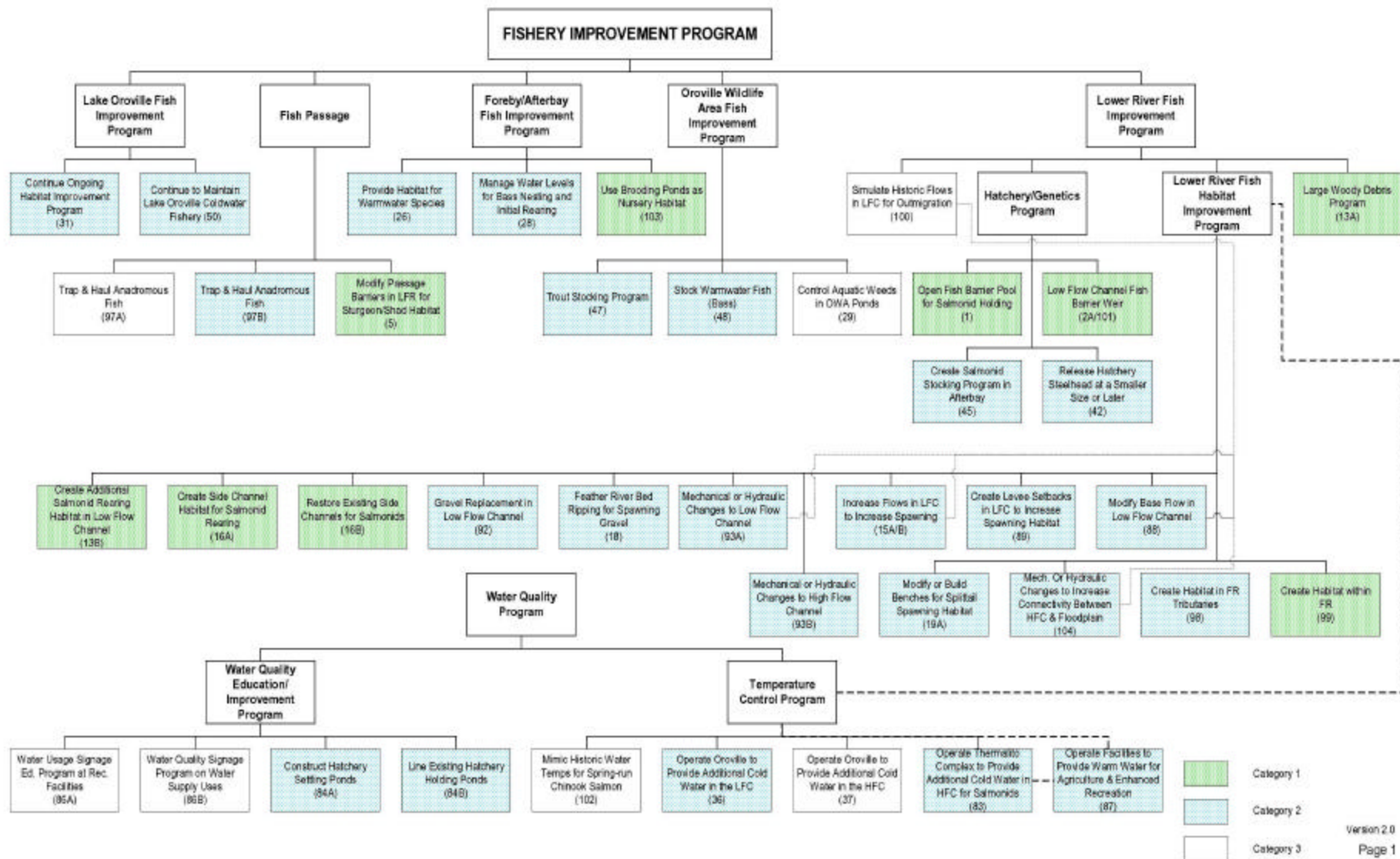
Grouping Resource Actions



Oroville Facilities Relicensing Project (P-2100)

Environmental Work Group Resource Action Flow Chart Diagram

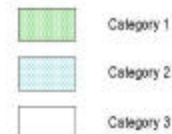
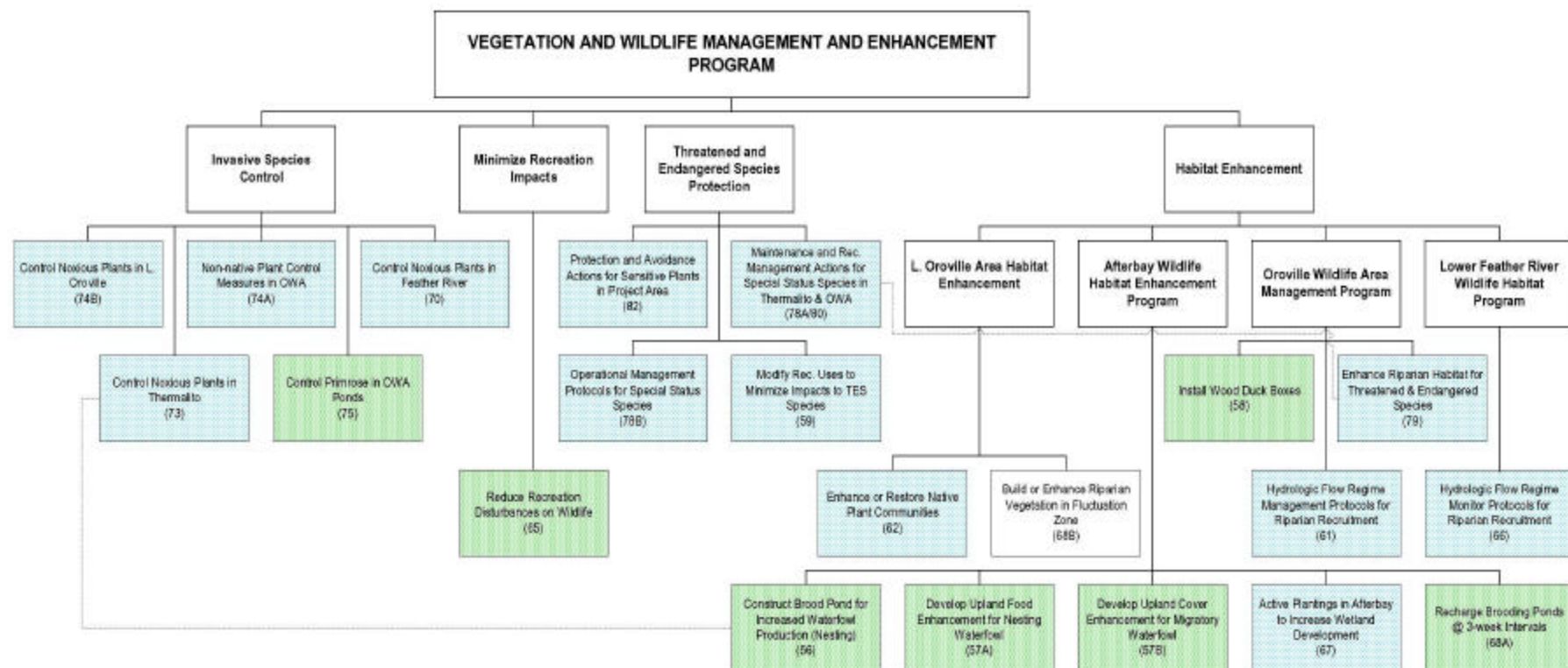
Wednesday, December 10, 2003



Oroville Facilities Relicensing Project (P-2100)

Environmental Work Group Resource Action Flow Chart Diagram

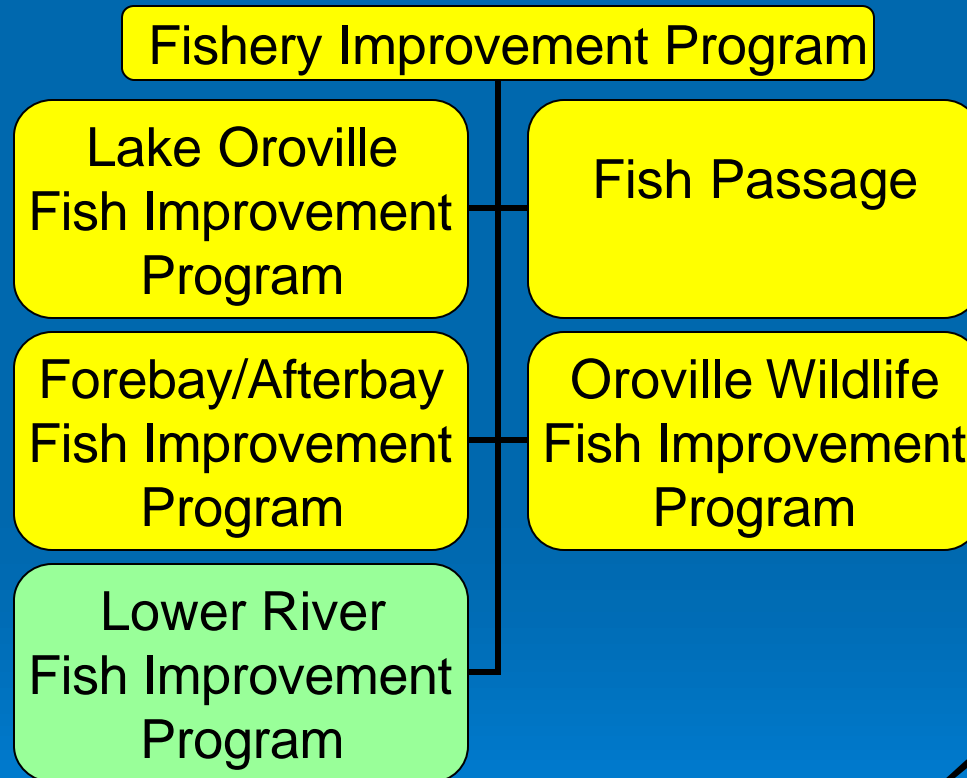
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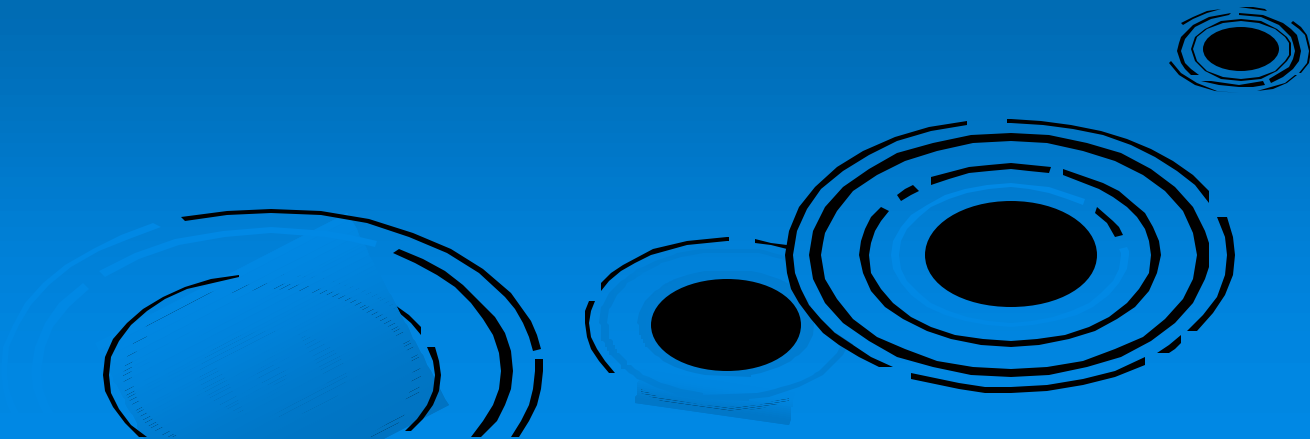
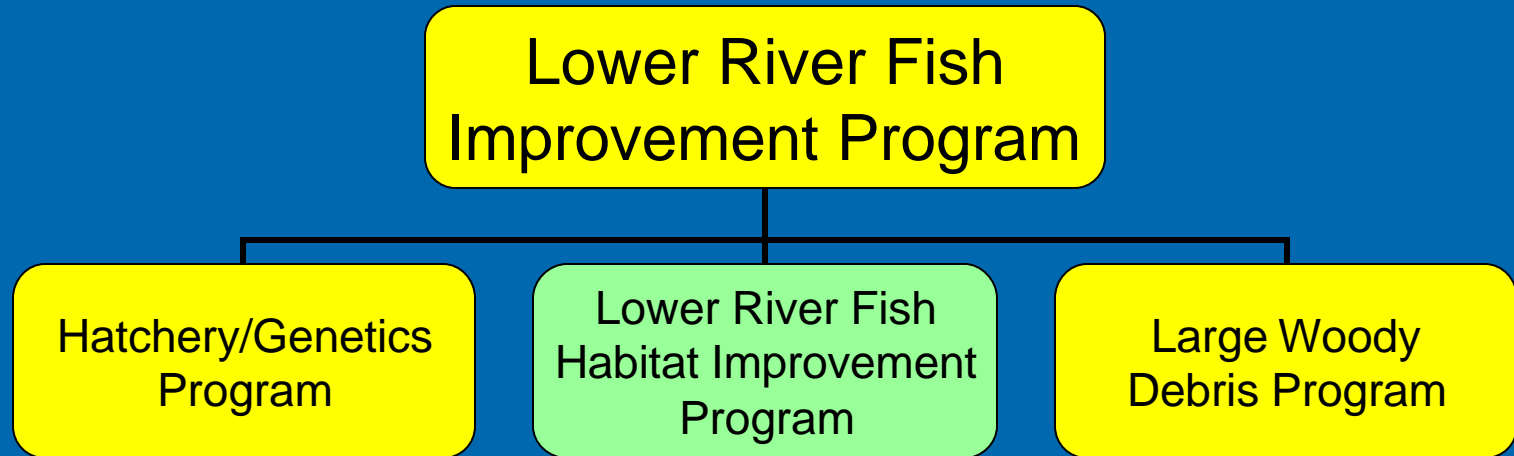
Version 2.0

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Fishery Related Actions



Lower River Fish Actions



Fish Habitat

Lower River Fish Habitat Improvement Program

Modify Base Flow

Increase Flow in LFC

Spawning Gravel Ripping

Restore Side Channel Habitat

Create Rearing Habitat in LFC

Connect Floodplain to River in HFC

Create Levee Setbacks

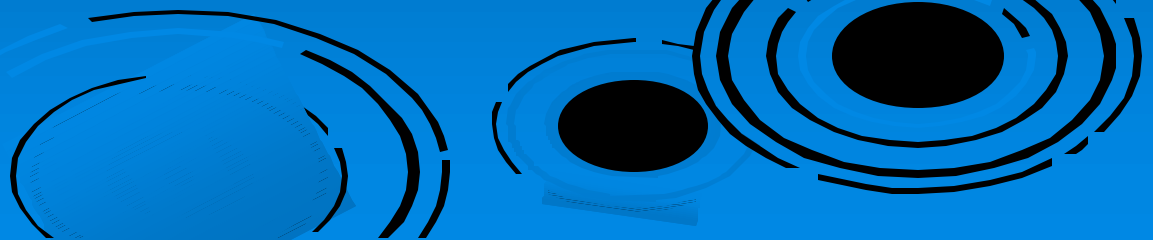
Mechanical Changes to LFC

Gravel Supplementation

Create Side Channel Habitat

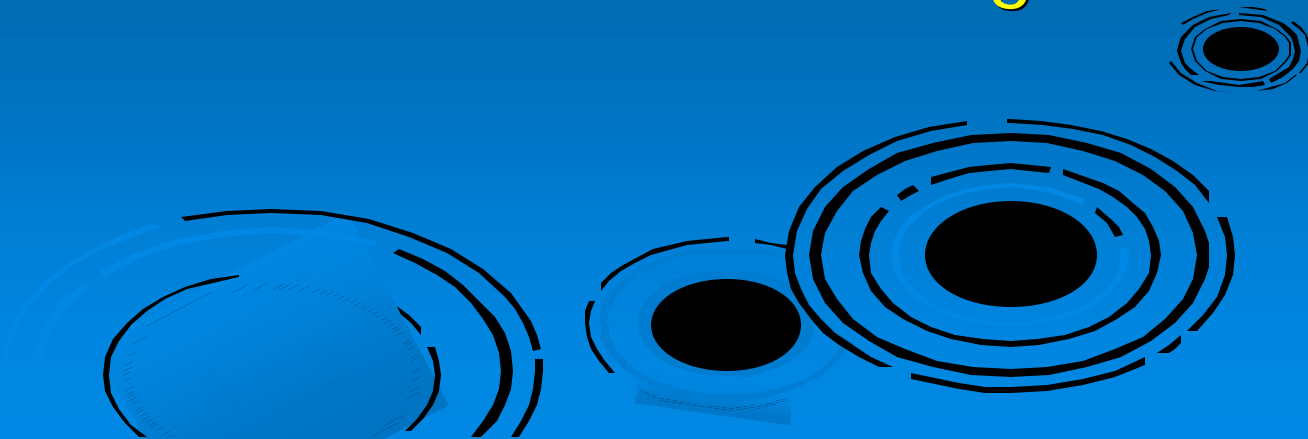
Create Habitat in FR & Honcut Creek

Create Benches for Splittail Spawning



Cross Resource Discussions

- ◆ Between RAMS
- ◆ EWG Meetings
- ◆ Engineering and Operations Workshops
- ◆ Other RAMS attend EWG Meetings



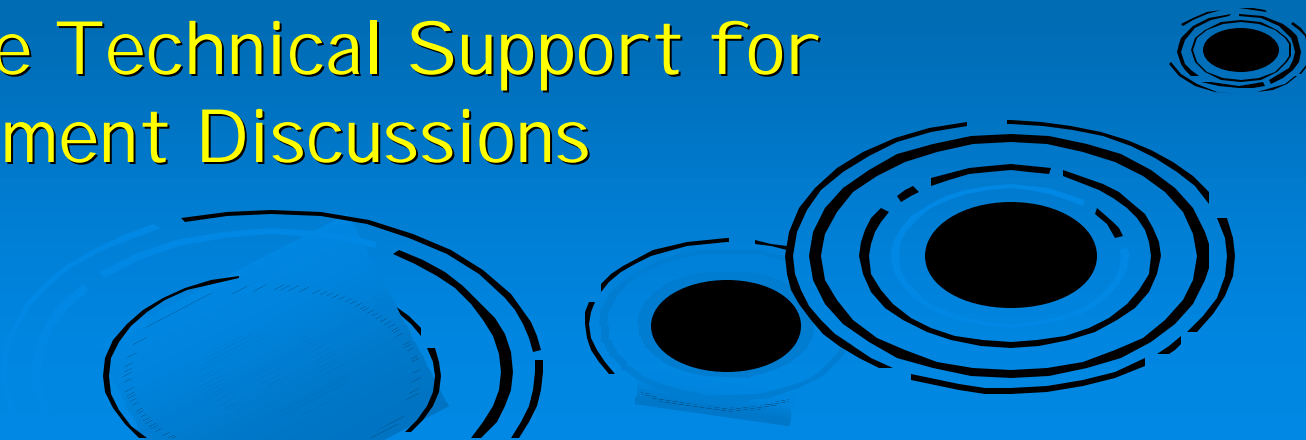
Timeline

◆ February 2004

- ◆ Complete initial Narrative Reports
- ◆ Compile list of "Ready to Evaluate" Resource Actions

◆ Beyond

- ◆ Continue to refine Resource Actions
- ◆ Provide Technical Support for Settlement Discussions



ASSEMBLING THE PIECES

